

CLAIMS:

1. A foamed polyolefin sheet of 3 to 8 mils thick having an MD tear strength of at least 150 gr/mil.
- 5 2. The sheet of claim 1 wherin the sheet is about 3 mils (75 microns) thick.
3. The sheet of Claim 1 wherein the MD tear strength is greater than 350 gr/mil.
4. The sheet of Claim 1 wherein the oxygen vapor transmission is 2.18 gr.mil/100 in.sq\*24 hr.
- 10 5. The sheet of Claim 1 wherein the water vapor transmission is 270 cc.mil/100 in.sq\*24 hr.
6. The sheet of claim 1 wherein the sheet has a density reduction of at least 20 percent compared to a non foamed sheet of the same composition.
- 15 7. The sheet of Claim 1 wherein the sheet is made from a blend comprising 10-90 percent by weight LLDPE and 90-10 percent LDPE.
8. The sheet of Claim 1 wherein the blend comprises 50 percent or more by weight of LLDPE.
9. The sheet of Claim 1 wherein the blend comprises about 70 percent by weight LLDPE.
- 20 10. The sheet of Claim 7 wherein the LLDPE has a density in the range of 0.900 to 0.930and an MI in the range of 2 and 6.
11. The sheet of Claim 7 wherein the LDPE has a density in the range of 0.917 g/cc to 0.923 gr/cc and an MI in the range of 0.2 and 6.
12. The sheet of Claim 1 wherein the sheet has been made using a land length to die gap ratio of less than 25.
- 25 13. The sheet of Claim 1 wherein the sheet has been made using a blow up ratio of from about 2.2 to about 4.0.
14. The sheet of Claim 1 wherein there the polyolefin has substantially no crosslinking.

15. In a process for producing a thin foamed sheet wherein a polymeric material is foamed and melt blown, the improvement comprising selecting as the polymeric material a blend comprising an LLDPE having a density in the range of 0.905 to 0.925 and an MI in the range of 0.5 and 6, and an LDPE has a density in the range of 0.917 to 0.923 and an MI in the range of 0.2 and 6.
- 5 16. The process of Claim 15 wherein when the film has a thickness of from 3 to 8 mils it has an MD tear strength of greater than 250 grams/mil and when the film has a thickness of less than 3 mils, then it has an MD tear strength of greater than about 75 grams/mil.
- 10 17. A foamed polyolefin sheet of less than 3 mils thick having an MD tear strength of at least 50 gr/mil.
18. The sheet of claim 17 wherein the sheet has a density reduction of at least 20 percent compared to a non foamed sheet of the same composition.
- 15 19. The sheet of Claim 17 wherein the sheet is made from a blend comprising 10-90 percent by weight LLDPE and 90-10 percent LDPE .
20. The sheet of Claim 19 wherein the blend contains about 70 percent LLDPE.
21. The sheet of Claim 17 wherein the sheet has been made using a land length to die gap ratio of less than 25.
- 20 22. The sheet of Claim 17 wherein the sheet has been made using a blow up ratio of from about 2.2 to about 4.0.
23. A consumer trash bag, grocery bag, produce bag, pallet wrap, food wrap, liner, heavy duty bag, industrial bag, consumer bag, shrink film, label, pouches for FFS packaging, tape, stand-up pouch, lamination film, or protective film comprising the foamed sheet of claim 17.